CLAIMS

What is claimed is:

1. An improved wall construction for positioning a plurality of rigid, self-supporting panels to provide exterior walls and/or divide or partition interior building space, said panels having a substantially rectangular shape with an inner and outer face and a top, bottom, front and rear edge, said wall construction comprising:

a plurality of parallel and coplanar orientated hat channel members, said hat channel members each having a substantially hat-shaped cross section that includes a large flange and a small flange joined together by a spine channel located therebetween, said large flange, small flange, and spine channel each having a substantially flat outer surface with said outer surfaces in substantially parallel respective position, said large and small flanges being in planar respective position;

a first panel positioned adjacent to said large flange on a first hat channel member such that inner face of said first panel is in contact with outer surface of said large flange with said front edge of first panel in substantially parallel alignment with said first hat channel member and inner face of said first panel partially covers outer surface of said large flange, said first panel further being

connected to said first hat channel by means of a plurality of penetrating connectors positioned through said large flange and terminating within said first panel;

a second panel positioned with inner face adjacent to said outer surface of spine channel on first hat channel member such that said front edge of second panel is in substantially parallel alignment with said first hat channel member and inner face of said second panel covers a portion of the outer surface of said spine channel, said first panel further being connected to said first hat channel by means of a plurality of penetrating connectors positioned through said spine channel and terminating within said second panel, said second panel further having a plurality of symmetric recesses centered along said front edge, said recesses each being furnished with a symmetric connector inserted therein such that one-half of each symmetric connector extends outward from said front edge;

a third panel positioned with inner face adjacent to outer surface of said large flange and said small flange and further being positioned with rear edge in abutted relation to said front edge of said first panel, said third panel further being connected to said first hat channel by means of a plurality of penetrating connectors positioned through said small flange and terminating within said third panel, and ;

a fourth panel positioned with inner face adjacent to said outer surface of said spine channel, said fourth panel further having a plurality of symmetric recesses centered along said rear edge, said recesses positioned to receive symmetric connectors located along front edge of said fourth panel is placed in abutted relation to front edge of said second panel.

2. The improved wall construction of claim 1 wherein said penetrating connector is selected from the group of nails, brads, tacks, screws, lag screws, rivets, bolts, lag bolts, machine bolts, carriage bolts, stove bolts, toggle bolts, anchor bolts, staples and rivets.

3. The improved wall construction of claim 1 wherein said symmetric recesses are provided with an adhesive placed therein.

4. The improved wall construction of claim 3 wherein said adhesive is comprised of polymer-based material.

5. The improved wall construction of claim 3 wherein said adhesive contains petroleum distillates.

6. The improved wall construction of claim 1 wherein said hat channel is made

from a metal or metal alloy.

7. The improved wall construction of claim 1 wherein said hat channel is made from a thermosetting polymer-based material.

8. The improved wall construction of claim 1 wherein said hat channel is made from a thermoplastic polymer-based material.

9. An improved method for constructing a wall including a plurality of rigid, self-supporting panels to divide or partition interior building space, said panels having a substantially rectangular shape with an inner and outer face and a top, bottom, front and rear edge, said front and rear edges having, along a centerline, a plurality of symmetric recesses for accepting a symmetric connector insert therein, said method comprising the steps of:

placing a first hat channel in a coplanar position to a proposed wall, said hat channel having a substantially hat-shaped cross section that includes a large flange and a small flange joined together by a spine channel located therebetween, large flange, small flange, and spine channel each having a substantially flat outer surface with said outer surfaces in substantially parallel respective position, said first hat channel further positioned so that outer surfaces of large flange, small

flange and spine channel are in parallel orientation with respect to the desired centerline of the wall, and securing said first hat channel in place by attachment to floor and ceiling;

placing a first panel adjacent to said first hat channel such that front edge of first panel is in substantially parallel position relative to said first hat channel and inner face of said first panel is in contact with and covers a portion of the outer surface of said large flange;

attaching said first panel to said first hat channel by means of a plurality of penetrating connectors placed through said large flange and terminating in said first panel;

placing a second panel adjacent to said first hat channel such that front edge of second panel is in substantially parallel position relative to said first hat channel and inner face of said second panel is in contact with and covers a portion of the outer surface of said spine channel;

attaching said second panel to said first hat channel by means of a plurality of penetrating connectors placed through said spine channel and terminating in said second panel;

inserting symmetric connectors into each of said recesses located along front edge of said second panel such that substantially 50% of each connector protrudes beyond said front edge of said second panel;

placing a second hat channel in substantially parallel orientation to said first hat channel, said second hat channel also having a substantially hat-shaped cross section that includes a large flange and a small flange joined together by a spine channel located therebetween, large flange, small flange, and spine channel each having a substantially flat outer surface with said outer surfaces in substantially parallel respective position, said second hat channel further positioned at a lateral distance from first hat channel equal to the width of one straw panel and oriented so that outer surfaces of large flange, small flange and spine channel are in parallel orientation with respect to the desired centerline of the wall, and securing said second hat channel in place by attachment to floor and ceiling;

placing a third panel adjacent to said first and second hat channels such that inner face of third panel is in contact with remaining exposed outer surface of said small flange on said first hat channel, rear edge of said third panel is in abutted contact with front edge of said first panel, and inner face of said third panel is in contact with and covers a portion of the outer surface of said large

flange on said second hat channel;

attaching said third panel to said first hat channel by means of a plurality of penetrating connectors placed through said small flange and terminating in said third panel;

attaching said third panel to said second hat channel by means of a plurality of penetrating connectors placed through said large flange and terminating in said third panel;

placing rear edge of a fourth panel in abutted contact with front edge of said second panel such that exposed portions of symmetric connectors located along front edge of second panel are fully received into said recesses in said rear edge of said fourth panel and further positioning said fourth panel adjacent to said second hat channel such that inner face of said fourth straw panel covers a portion of the outer surface of said spine channel, and;

attaching said fourth panel to said second hat channel by means of a plurality of penetrating connectors placed through said spine channel and terminating in said fourth panel.

10. The improved method for constructing a wall of claim 9, further comprising

the step of providing said symmetric recesses with adhesive prior to inserting symmetric connectors therein.